

**Significant Analysis**  
**WAC 246-491**  
**Vital Statistics Certificates**

**I. Background: Include the general goals and specific objectives of the statute**

The rule requires that hospitals, funeral directors, and certifiers of causes of death collect information for birth, fetal death and death certificates that is slightly different from the U.S. standard certificates, but on a form that is constructed and delivered by the Center for Health Statistics/DOH. All persons or business affected have filled in and submitted these certificates as a part of their business practice since beginning their business. The birth certificate data are collected by a software instrument from data that the hospitals and birthing centers generate on site from hospital records, and a work sheet filled in by parents.

**II. Justify the need for the rules. Include an analysis of alternatives to rulemaking and the consequences of not adopting the rules.**

**A. Federal rule revisions initiated the revision**

The rule to be amended defines the items included on vital statistics certificates provided by the Washington State Center for Health Statistics (CHS). This amendment is necessary because of recent changes in federal recommendations cited in Washington State law. RCW 70.58.055 requires CHS to use on its vital statistics certificates, at a minimum, the items recommended by the National Center for Health Statistics (NCHS). NCHS periodically revises its recommendations, to increase the relevance and quality of data collected on the certificates. Historically the national revision prompts a revision of state certificates, to ensure nation-wide comparability and take advantage of improvements suggested by national reviews of the certificate items. Implementation of these recommendations for the birth and fetal death certificates is expected to take effect January 1, 2003. Implementation for the death certificate will be January 1, 2004.

**B. Changes proposed for the rule**

The current rule changes modify the certificates only slightly. Birth certificate data will be collected by a web instrument from data that the hospitals and birthing centers generate on site from hospital records, and a work sheet filled in by parents. These items are proposed for collection are new under the rule:

- Tribal reservation name
- Mother's telephone number
- Length of time at mother's current residence
- Mother's and father's occupation and industry
- Infant head circumference

The death certificate, which is being approved by this rule change, will not be in effect until January 1, 2004. The change will not affect the methods by which funeral directors collect their information, since they rely upon informants—family members of the

deceased, doctors, or medical examiners, nursing home or hospital staff. There are two additions new to the certificate (*tribal reservation name and county of injury*). Based on other analyses, these items would add 15 seconds to the completion time of each death certificate. There are six items deleted from the certificate (*License number of funeral director, Date pronounced dead, Time pronounced dead, Signature of person pronouncing death, License number of person pronouncing death, and Date person pronouncing death signed*). As a conservative estimate, the timesavings from the deletions would be at least 30 seconds per death certificate. Thus, the net change is 15 seconds less time to fill in the new death certificate. For this reason, an item analysis for death certificates is not included.

### **C. Changes considered but not adopted**

An alternate rule would increase the number and complexity of changes to the certificate. The large number of items would add a burden for data collection and reporting. The Review Team considered whether an item would be available in other data sources (even if not quite as readily available as birth certificates) or could be collected by special surveys rather than being added to the birth certificate and being collected for every birth for the next 10 years or so. The team considered the following additional new items, They were not included on the birth certificate because they were burdensome:

- Participation in programs in addition to WIC:
- Hepatitis B items:
  - HBIG given and date
  - Mother tested?
- Type of provider doing prenatal care:
- Infant crown heel length

These existing items were not changed because they were burdensome:

- Birth place type: For each birth place type collect planned vs actual place and separate home births into planned with licensed attendant; planned with unlicensed attendant; and unplanned.
- One minute apgar score: Add to apgar score.
- Obstetric procedures: Add invasive fetal monitoring procedures (such as fetal scalp electrodes or blood sampling):
- Maternal infections: Add other infections: Rare conditions such as bacterial vaginosis, history of herpes, listeria.
- Obstetric procedures: Add amniocentesis.
- Characteristics of labor: Add two items
  - Inductions without indications:
  - Antiretroviral for HIV received by mother:

**III. Compare the probable benefits of the rules and the probable costs. Consider both the qualitative and quantitative benefits and costs.**

The rule has been reviewed. Probable benefits exceed the probable costs. The analysis first describes the qualitative benefits for each new item. The next section describes the quantitative benefits of adopting all of the proposed new items.

**A. Benefits of proposed items**

**1. Qualitative Benefits**

- a) Some benefits have not been quantified. Past research studies using data currently collected on the birth and fetal death certificates has supported changes in provider advice to older first-time mothers, parents who smoke and parents of children with metabolic disorders. Studies of blood lead have provided important information about the impacts on brain development. While it is not possible to know in advance what scientific results will be discovered, the items may help discover additional ways to promote healthy babies and reduce lifetime burdens of retardation.
- b) **Birth certificate:** Benefits of specific items on the birth certificate are listed below:
  - i) **Tribal reservation name:** Used to make progress towards eliminating racial disparities. Reservation, rather than tribe, defines where people get services and this will be a valuable addition to the race data. This change will affect approximately 2.4 percent of births. It will help identify whether any risks affect people who live on reservation populations more than those who live away from reservations.
  - ii) **Mother's telephone number:** Used by hospitals to contact the mother if they have a question about the data she provided or if some information is missing. Used by immunization programs for immunization reminders. Used by research projects (such as PRAMS) to follow up with mothers for surveys. (This item is currently being collected.) This information may help parents avoid disabilities due to metabolic disorders that are discovered after the parents and baby leave the hospital or birthing center.
  - iii) **Length of time at mother's current residence:** Useful measure of environmental exposure. Also used as an approximate measure of population mobility. (This item is currently being collected.) This information may help identify risks based on exposure to toxic materials or conditions in the air, water, soil or dwelling.
  - iv) **Mother's and father's occupation and industry:** Used as an important measure of socioeconomic status (SES) and of occupational exposure. It may help identify infants at greater risk because of the parents' occupations. While this was not added to the US standard because many states do not have the resources to code the data, the National Center for

Health Statistics recommended that states collect this item if they can. Washington State already has an automated coding system to code the data from the entries keyed in at the hospital. (This item is currently being collected.)

- v) **Infant head circumference:** This is a useful supplement to birth weight data. It is an important measure of gestational age and indicator of other possible medical conditions such as microcephaly, mental retardation, and under nutrition in utero. These conditions can have profound consequences for mental and physical limitations for the life-time of the child. The data should be easy to collect.

c) **Fetal Death Certificate**

- i) **Tribal reservation, length of time at residence, mother's occupation/industry:** See birth certificate justification
- ii) **Father's education, Hispanic origin, race, and occupation/industry:** These items are collected on the birth certificate. In order to produce perinatal statistics and to examine the role of the father's demographics on fetal loss, they need to be included on the fetal death certificate as well. (These items are currently being collected.)
- iii) **Other added items:** These are required by state law since the fetal death form is a certificate whereas the US standard is just a report. Thus, the Washington State fetal death certificate must contain the appropriate signatures and information on the disposition of the body. (These items are currently being collected.)

B. **Benefits from items rejected**

There would be very few benefits from adding rejected items. The review team rejected items suggested for the birth certificate listed above because:

1. Information can be more accurately obtained from other databases;
2. Some items are quality assurance issues and should not be part of the birth certificate. The standard of care is to give a specific treatment to all infants/mothers who meet specific medical conditions;
3. The item is poorly reported now. Adding another similar variable would not provide good quality information;
4. A particular item is harder to get than a similar item that is already collected;
5. Need to conserve space on the form.

C. **Quantified Benefits**

1. All disabilities have high societal costs in that they impose medical costs, cost of care, excess morbidity and early mortality. Individuals with a disability are also

likely to have a reduced lifetime income through both lower salaries and higher unemployment rates. Some of the disabilities that may be prevented by collecting additional information on the birth certificate and fetal death certificate may result from metabolic disorders or exposure to toxic materials in their environments. A recent CDC study estimates the present value of the lifetime costs for the following disabilities which may result from neural damage. Neural damage may result from metabolic disorders or toxic exposures<sup>1</sup>:

- Cognitive functioning: retardation needing special education      \$870,000
- Hearing impairment      \$290,000
- Vision impairment      \$450,000

If we assume even one cognitive impairment avoided any time in the next 10 years, the benefits would exceed the cost.

2. Uncertainty for the benefits estimate is based on the difficulty of knowing the number of children whose limitations may be prevented by collecting the additional information. Uncertainty in estimating the costs is based on the estimates of time needed to complete additional items.

## **D. Costs**

### **1. Description of Costs**

- a) The costs of changes for the fetal death certificate are negligible and will not be discussed further. The costs of changes to the birth certificate are estimated at \$1,582 for the largest hospitals, primarily because of the large number of births (4,967 in 2001). The total costs are estimated at \$26,000 to \$27,000.
- b) The following costs have been quantified.
  - i) The increased costs are based on the additional time it will take to complete the birth certificate. Experts estimated the time per change.
  - ii) Uncertainty: the estimates of time per item may vary by a small amount in a particular situation.
  - iii) Time Estimates

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<sup>1</sup> Economic Costs of Mental Retardation, Cerebral Palsy, Hearing Loss, and Vision Impairment, Amanda A. Honeycutt, Scott D. Grosse, Laura J. Dunlap, Diana E. Schendel, Hong Chen, Edward Brann, Ghada al Homsy, RTI, Research Triangle Park, NC, National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention, Atlanta, GA, March 2002.

Table 1  
Additional Time to Complete Items<sup>2</sup>

Additional Items	Additional Time (sec)
Tribal reservation name (if applicable)	10
Mother's telephone number	5
Length of time at mother's current residence	5
Mother's occupation and industry	10
Father's occupation and industry	10
Optional signature line for person reviewing the worksheet	0
Infant head circumference	60
Deleted Item: Date filed by Registrar	-5
Total	95

iv) Estimated Wages

The changes in cost are estimated in terms of the salary of the person completing the items. In large hospitals, the staff time was estimated for a Medical Assistant, occupation code 31-9092, with an average annual wage of \$12.07 per hour. In small hospitals, staff time was estimated for a registered nurse, occupation code 29-1111, with an average annual wage of \$24.22 per hour.

v) Present Value of Costs

The present value of the costs is estimated at \$1,582 for large hospitals and \$10.23 for small hospitals. The estimated total for the state is \$26,000 to \$27,000 per year as births and fetal deaths increase over time.

vi) Data Sources

Data for the cost of staff time came from the 2000 State Occupational Employment and Wage Estimates for Washington State, Occupational Employment Statistics, Bureau of Labor Statistics, U.S. Department of Labor [[http://www.bls.gov/oes/2000/oes\\_wa.htm](http://www.bls.gov/oes/2000/oes_wa.htm)]. See Table 3 for the analysis.

<sup>2</sup> Estimates provided by Pat Starzyk, Center for Health Statistics, Washington State Department of Health.

Table 2

**Estimate of Cost of Rule for proposed 2003 Washington State Birth Certificate  
and U.S. Standard Certificate**

	Required by			Added	Large Hospitals		Small Hospitals	
	Federal	DOH		time per	# Births/yr	4967	# Births/yr	16
	Reg.	Prop.	Status	birth	Cost/birth <sup>1</sup>	Total \$	Cost/birth <sup>2</sup>	Total \$
<b>Changes to existing items:</b>								
<b>Added items:</b>								
Tribal reservation name (if applicable)	--	Yes	<i>Eligible</i>	10	0.0335	166.39	0.0673	1.08
Mother's telephone number	--	Yes	<i>Eligible</i>	5	0.0168	83.45	0.0336	0.54
Length of time at mother's current residence	--	Yes	<i>Eligible</i>	5	0.0168	83.45	0.0336	0.54
Mother's occupation and industry	--	Yes	<i>Eligible</i>	10	0.0335	166.39	0.0673	1.08
Father's occupation and industry	--	Yes	<i>Eligible</i>	10	0.0335	166.39	0.0673	1.08
Optional signature line for person reviewing the worksheet	--	Yes	<i>Eligible</i>	0	0	0	0	0
Infant head circumference	--	Yes	<i>Eligible</i>	60	0.2012	999.36	0.4037	6.46
<b>Deleted items:</b>								
Date filed by registrar	--	Yes	<i>Eligible</i>	-5	-0.0168	-83.45	-0.0336	-0.54
Total				95	0.3185	1581.99	0.6391	10.23

<sup>1</sup> Large Hospital Costs estimated based on work done by a "Medical Assistant," 31-9092, mean annual wage \$12.07/hour

<sup>2</sup> Small Hospital Costs estimated based on work done by a "Registered Nurse," 29-1111, mean annual wage \$24.22/hour.

## 2. Present value of net benefits

The present value of the benefits of collecting the data is based on the assumption that the data may prevent one case of mental retardation. The costs are based on the extra time to complete the additional items. Table 3 shows the calculations (below).

Table 3  
Present Value of Changes to Birth and Fetal Death Certificates

Year	Present Value Multiplier	Costs <sup>1</sup>	Benefits <sup>2</sup>	Net Benefit	Present Value of Net Benefit
2003	1.0000	26,399	0	(26,399)	(26,399)
2004	0.9702	26,491	0	(26,491)	(25,702)
2005	0.9413	26,610	0	(26,610)	(25,048)
2006	0.9133	26,744	0	(26,744)	(24,425)
2007	0.8861	26,894	0	(26,894)	(23,831)
2008	0.8597	27,045	0	(27,045)	(23,251)
2009	0.8341	27,194	0	(27,194)	(22,683)
2010	0.8093	27,341	0	(27,341)	(22,127)
2011	0.7852	27,486	0	(27,486)	(21,582)
2012	0.7618	27,627	870,000	842,373	641,720
Total					426,673

<sup>1</sup> Costs are based on 81,500 births and fetal deaths in 2002 using the OFM November 2002 population forecast figures and a decrease of 0.1 in the birth rate per year.

<sup>2</sup> Benefits are based on preventing one case of retardation.

### E. Summary: Do the benefits outweigh the costs

Probable benefits exceed the probable costs.

## IV. Justify the proposed rules as least burdensome alternative to practitioners

The current rule changes modify the certificates only slightly. Alternate items considered would increase the number and complexity of changes to the certificate. The large number of items would add a burden for data collection and reporting. The Review Team considered that the items proposed for the rule to be the least burdensome way to gather necessary data.

## V. Will compliance with these rules cause a practitioner to violate another state or federal law?

No.



**VI. Will the rules impose more stringent requirements on private entities than public entities?**

No.

**VII. Do any federal statute or regulation regulate the same activities? If yes, do they differ from the proposed rules?**

- A. Section 306 of the Public Health Service Act, as amended, establishes the National Center for Health Statistics (NCHS) and charges it with the following activities, among others:
  - 1. (subsection g) To secure uniformity in the registration and collection of mortality, morbidity, and other health data, the Secretary (of NCHS) shall prepare and distribute suitable and necessary forms for the collection and compilation of such data.
  - 2. (subsection h1) There shall be an annual collection of data from the records of births, deaths, marriages and divorces in registration areas.
- B. Since the proposed rule requires the Center for Health Statistics to use the items on the standard forms developed by NCHS, it does not differ from the federal statute.